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TM-(L)-890/007/00A

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# TECHNICAL MEMORANDUM

(TM Series)

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Proposal for Additional Modifications to  
MULTICON

by

H. J. Frieden  
27 March 1963

Approved

J. B. Munson

SYSTEM

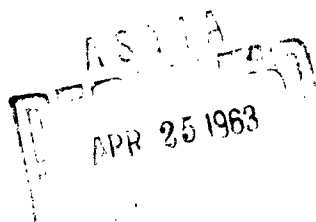
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CURRENT MODIFICATION

Modified Pages

Notes and Filing Instructions

1	ERRATA* Insert the following to Table of Contents:  2.10 Task X - List Conflict Time..... 7
7	Replace with page dated 27 March 1963.
8	Replace with page dated 27 March 1963.
9	Replace with page dated 27 March 1963.

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\*ERRATA modification to be entered by hand.

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0007 to Station 3. Other possible solutions can be also seen. As described before, the program finds all solutions and assigns the "best" one.

The trouble occurs when the truth table looks like this:

TABLE 2  
Vehicles

	1st Priority	2nd Priority	3rd Priority
Station 1	0005		
Station 2		0006	0007
Station 3	0005		

In cases such as this, there are no solutions wherein all vehicles can be assigned service at individual stations. The obvious and desired solution is to drop the lowest priority vehicle from the truth table and continue with the normal resolution logic.

The program is constructed to recognize this type of a situation and, not knowing what else to do, jumps to an error stop. The task to be accomplished is, instead of error stopping, to delete the lowest priority vehicle from the truth table and continue with a normal conflict resolution.

#### 2.10 Task X - List Conflict Time

Conflict time is defined as the absolute value of the minimum fade time minus the maximum acquisition time for two vehicles in a REALTIME or CHANGEOVER conflict. The task is to list this time on the MERGEOUT, STAOUT, VEHOUT, and CONLIST listings.

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#### APPENDIX A

Figure 1 shows a sample plotted MULTICON output with four stations servicing five vehicles. Up to ten stations and ten vehicles can be plotted.

One line is printed for each minute between the first acquisition and the last fade. A letter under a station indicates that the vehicle designated by this letter can be seen by the station at some time during this minute. Revolution number is printed above the letters indicating the vehicle-station contact and maximum elevation (in degrees) is printed below.

The numbers 1-4 separate the stations and aid in identifying them. Each page is completely filled, and there are no headings after the first page.

The sample shows that station COOK will see vehicle 3600 from 2358 until 0004. The revolution number for this pass is 26.5, and the maximum elevation is 31 degrees. A conflict exists with vehicle 1620 from 2358 to 0000.

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**Figure 1 - Sample Plotted MULTICON Output**

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System Development Corporation,  
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PROPOSAL FOR ADDITIONAL MODIFICATIONS  
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Scientific rept., TM(L)-890/007/00A,  
by H. J. Frieden. 27 March 1963, 5p.  
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Division Program, for Space Systems  
Division, AFSC)

Unclassified report .

DESCRIPTORS: Programming (Computers).  
Satellite Networks.

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Presents changes to "Proposal for  
Additional Modifications to  
MULTICON", by J. G. Hillhouse,  
TM(L)-890/007/00, dated  
4 March 1963.

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